

METRIC - STREAM CROSSING STRUCTURE SURVEY REPORT

Wisconsin Department of Transportation

DT1699 1/2002

<input type="checkbox"/> Box Culvert		<input type="checkbox"/> Culvert Extension		<input type="checkbox"/> Right <input type="checkbox"/> Left	<input type="checkbox"/> Stream Crossing	<input type="checkbox"/> Other
Final Plan Due Date	Preliminary Plan Due Date (N/A for Culverts)	<input type="checkbox"/> Town of <input type="checkbox"/> Village of <input type="checkbox"/> City of				
New Structure Number	Highway	County	Design Project ID			
Aesthetics Level (For Levels 2, 3 & 4, Explain on Page 4) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4			Construction Project ID			
Station	Section	Town	Range			
Indicate Purpose <input type="checkbox"/> Waterway <input type="checkbox"/> Other (Describe)		Identify Stream (If Applicable)				
District Contact Person/Area Code with Telephone Number		Traffic Forecast Data				
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed	Functional Class	
Consultant Contact Person/Area Code with Telephone Number				kmph		

Instructions for Structure Survey

In addition to this report, the following information shall be submitted.

- Small County Map** on which the location of proposed structure is shown in red and highway relocation, if any, in green.
- Plan and Profile Sheet** on proposed reference line of highway showing the following: (a) Ground line; (b) Finished grade line; (c) Profile grade line elevations at least every 40 meters for 300 meters each side of the structure; (d) Vertical curve control points; (e) Horizontal curve control points; (f) Curve data, including full SE and runoff distance.
- Contour Map** of the site drawn to a scale of not less than 1:200 with 0.5 meters contours and showing the following: (a) Existing highway and structure; (b) Proposed highway alignment and R/W; (c) Station numbers; (d) North point; (e) Buildings; (f) Underground facilities; (g) Other features which influence the design; (h) Recommended channel change; (i) Direction of stream flow; (j) Stations at end of existing structure; (k) Proposed structure and extent of riprap for consultant designed structures.
- Typical Roadway Cross Section** of proposed approaches showing the following: (a) Dimensions; (b) Slopes; (c) Type and width of surfacing or pavement; (d) Sidewalk, curb and gutter; (e) Subgrade and pavement thickness; (f) Clear zone width.
- Stream Cross Section** at upstream and downstream face of existing bridge and at one bridge length upstream and downstream. Surface water elevations at 450mm upstream and downstream of existing bridge.
- Original Photographs** of: (a) Existing structure; (b) Upstream and downstream structures; (c) Buildings within 30 meters of the proposed structure; (d) Unobstructed panoramic view looking upstream and downstream from proposed structure. *Air photo mosaics if available.*
- Proposed Location Map** showing structure location and number, one per structure when there are multiple structures on the project.
- Attach a copy of the regulatory flood plain map (FEMA map) depicting the site.
- For consultant designed structures - **Hydraulic Report** which may contain the following: (a) USGS quadrangle sheet showing proposed location, highway alignment and reach of river; (b) All available flood history, high water marks with date of occurrence, nature of flooding, damages and scour information; (c) Factors affecting water stages; (d) Navigation Clearance, for guidance in making report, see Chapter 8 of Bridge Design Manual; (e) Discussion of alternatives considered, factors influencing selection.

☐ Check here if to be determined by Central Office☐ Check here if to be determined by Central Office

YES	NO		YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Is Project in Flood Hazard Area	<input type="checkbox"/>	<input type="checkbox"/>	Structure Backfill Required
<input type="checkbox"/>	<input type="checkbox"/>	Have Soil Borings been Requested (If not, Please Explain on Page 4)	<input type="checkbox"/>	<input type="checkbox"/>	Riprap Required
<input type="checkbox"/>	<input type="checkbox"/>	Staged Construction	<input type="checkbox"/>	<input type="checkbox"/>	Lighting Required on Bridge
<input type="checkbox"/>	<input type="checkbox"/>	Temporary Structure Required			Bolt Circle Diameter _____ mm
<input type="checkbox"/>	<input type="checkbox"/>	Pipe Underdrains at Abutments	<input type="checkbox"/>	<input type="checkbox"/>	Camber for Barrel Recommended (Culvert only)
			<input type="checkbox"/>	<input type="checkbox"/>	Is this project on the National Highway System?

Proposed Disposition of Existing Structure

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Structure will be Removed
<input type="checkbox"/>	<input type="checkbox"/>	Bid item will be included in Structure Plan Quantities
<input type="checkbox"/>	<input type="checkbox"/>	Structure will remain in Service Structure Number

☐ Special Foundation Treatment Required - See soils Unit "Site Investigation Report"

If utilities will be carried on the structure, complete the following data.

Type	Size	Opening Size at Abutments	Weight	Pressure

For Structure Designers Use

Proposed Box Culvert

Aprons	Type	Elevations
Inlet		
Outlet		
Openings - Number	Clear Span at Right Angles to Axis of Box	Inside Height of Box
Slope of Channel at Culvert		

All Proposed Structures

Spans - Number		Spans Lengths (C.L. to C.L. of Substructure)		Skew <input type="checkbox"/> R.H.F. <input type="checkbox"/> L.H.F.	
Drainage Area	_____ km ²	Q (100)	_____ m ³ /sec.	Existing Bridge High Water (100) _____ m	
High Water (100)	_____ m	Q (Struct.)	_____ m ³ /sec.		
Velocity	_____ m/sec.	Q (Rdwy.)	_____ m ³ /sec.		
Waterway Area	_____ m ²	Q (Suple. Struct.)	_____ m ³ /sec.		
Scour Code _____					

Temporary Structure

Overtopping Frequency (If>100Yrs.-NA)

Regulatory High Water

Q_____ Yr.	_____ m ³ /sec.	Q_____ Yr.	_____ m ³ /sec.	
High Water	_____ m	High Water	_____ m	_____ m
Min. A (BR)	_____ m ²			

Existing Structures At or Near Proposed Site

STRUCTURE DATA		UPSTREAM	AT SITE	DOWNSTREAM
Structure Number (B / P / C)				
Railroad or Highway Structure				
Distance from Proposed Site in Kilometers				
Type:	Superstructure			
	Substructure: Abutments			
	Piers			
Is Structure Supported on Bearing Piles?				
Condition:	Superstructure			
	Substructure			
Year Built				
Number of Spans				
Clear Span (Between Inside Faces of Substructure Units)				
Lengths Along CL Roadway/Track				
Roadway Width Between Curbs				
Sidewalk:	Number			
	Clear Width			
	Location			
Skew:	Stream			
	Structure			
* Elevation	Finished Grade			
+ +	Low Chord			
Does Drift Pass Satisfactorily				
Does Ice Pass Satisfactorily				
Character of Material in Stream Bed				
**	Character of Drainage Basin			
Stream-Bed Scour: Visable (Y/N)				
Due to Restricted Waterway				
Due to Poor Location				
Due to Improper Skew				
Extreme High Water Elevation - Date				
Cause of High Water and Source of Information				
Low Water Elevation				
Normal Water Elevation				
Streambed Elevation				
Water Surface	Date	450 mm Upstream	At Site	450mm Downstream
Elevation ***				

Existing Culvert Information

Attach Sketch

Slope of Channel at Structure (meters/30 meters)

Elevation: Finished Grade _____ Inlet - Invert _____ - Top of Opening _____ Discharge - Invert _____ - Top of Opening _____	Spans: Number _____ Width Normal - Barrel _____ Allowable High Water _____ Floor: Concrete, Earth, Silted _____ Condition: Wingwalls _____ Barrel _____
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* Use same datum for all structures within one kilometer of proposed structure.

** Mountains, Hilly, Rolling, Flat, Swampy, Wooded, Cultivated, Pasture, etc. - Give percentage of each.

*** Measured along thread of channel.

+ + Take these elevations at the same station.

Additional Information

Elaborate on other concerns such as: DNR, Local, Aesthetics and Stage Construction

FOR BRIDGE OFFICE USE

Plans Checked By

Date